IN THE CLAIMS

This listing of claims replaces all prior listings.

1. (currently amended) A method in a data processing system having a program, the method comprising the steps of:

providing a datatype having a metadata that describes a data and a reference to the data, the data being maintained separately from the datatype, the metadata including a key that enables the datatype to be joined with other datatypes having the key in their respective metadata; and

publishing the datatype, a subscriber asynchronously receiving the datatype responsive to subscribing to the datatype, subscribing to the other datatypes responsive to identifying the key in the received datatype, and asynchronously receiving the other datatypes that have the key in their respective metadata responsive to subscribing to the other datatypes.

2. (original) The method of claim 1, wherein the data is not published with the datatype.

3. (original) The method of claim 1, wherein the reference to the data is a pointer.

4. (original) The method of claim 1, further comprising the step of:
registering the datatype.

5. (original) The method of claim 1, further comprising the step of:
registering the key.

6. (original) The method of claim 1, wherein the metadata includes a plurality of different keys.

7. (currently amended) A tangible computer-readable medium containing instructions that cause a program in a data processing medium to perform a method comprising the steps of:

providing a datatype having a metadata that describes a data and a reference to the data, the data being maintained separately from the datatype, the metadata including a key that enables the datatype to be joined with other datatypes having the key in their respective metadata; and

publishing the datatype, a subscriber asynchronously receiving the datatype responsive to subscribing to the datatype, subscribing to the other datatypes responsive to identifying the key in the received datatype, and asynchronously receiving the other datatypes that have the key in their respective metadata responsive to subscribing to the other datatypes.

8. (original) The computer-readable medium of claim 7, wherein the data is not published with the datatype.

9. (original) The computer-readable medium of claim 7, wherein the reference to the data is a pointer.

10. (original) The computer-readable medium of claim 7, further comprising the step of:

registering the datatype.

11. (original) The computer-readable medium of claim 7, further comprising the step of:

registering the key.

12. (original) The computer-readable medium of claim 7, wherein the metadata includes a plurality of different keys.

13. (currently amended) A data processing system comprising:

a memory having a program that:

provides a datatype having a metadata that describes a data and a reference to the data, the data being maintained separately from the datatype, the metadata including a key that enables the datatype to be joined with other datatypes having the key in their respective metadata, and

publishes the datatype, a subscriber asynchronously receiving the datatype responsive to subscribing to the datatype, subscribing to the other datatypes responsive to identifying the key in

the received datatype, and asynchronously receiving the other datatypes that have the key in their respective metadata responsive to subscribing to the other datatypes; and

a processing unit that runs the program.

14. (currently amended) A data processing system comprising:

means for providing a datatype having a metadata that describes a data and a reference to the data, the data being maintained separately from the datatype, the metadata including a key that enables the datatype to be joined with other datatypes having the key in their respective metadata; and

means for publishing the datatype, a subscriber receiving the datatype responsive to subscribing to the datatype and receiving the other datatypes that have the key in their respective metadata.

means for publishing the datatype, a subscriber asynchronously receiving the datatype responsive to subscribing to the datatype, subscribing to the other datatypes responsive to identifying the key in the received datatype, and asynchronously receiving the other datatypes that have the key in their respective metadata responsive to subscribing to the other datatypes.

15. (canceled).